


*International Journal of Learning, Teaching and Educational Research*  
Vol. 23, No. 4, pp. 525-546, April 2024  
<https://doi.org/10.26803/ijlter.23.4.27>  
Received Mar 3, 2024; Revised Apr 26, 2024; Accepted Apr 30, 2024

# The Effects of Microlearning on EFL Students' English Speaking: A Systematic Review and Meta-Analysis

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**Abstract.** Despite advancements in microlearning-based English-speaking education, comprehensive meta-analyses of its effectiveness remain scarce. This study aimed to evaluate the effect of microlearning on English speaking among English as a foreign language (EFL) students through a systematic review and meta-analysis. Following the PRISMA principles, the research was conducted in June 2023 across five phases: problem identification, data collection, screening, evaluation, and extraction. Data were obtained from peer-reviewed journals indexed in databases, including ERIC, Science Direct, Scopus, and Google Scholar. Data analysis was undertaken using the modified Newcastle-Ottawa Scale-Education (NOS-E). Subsequently, the R meta program facilitated a robust meta-analysis, allowing us to comprehensively gauge effect size. A literature review yielded 10 studies (combined sample size = 743) that matched the eligibility guidelines. On the NOS-E, each study scored 4.55 out of 6. The results demonstrate the superiority of microlearning over traditional lectures (total English-speaking scores, SMD = 1.43, 95%CI = 1.27–1.59,  $p < .05$ ). In the meta-analysis, heterogeneity was revealed (total scores for English speaking,  $I^2 = 66\%$ ,  $p < .01$ ), with no publication bias. Microlearning significantly benefits English language teaching (ELT) and enhances EFL students' English-speaking skills. However, limitations do exist. By addressing these limitations, educators may refine pedagogical practices for optimal ELT methods for EFL learning.

**Keywords:** English as a foreign language (EFL); English speaking; meta-analysis; microlearning; systematic review

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## 1. Introduction

In current times, possessing strong English-speaking skills is vital for communication and negotiation (Adipat, 2023; Jalkute, 2021). Proficient English speaking not only fosters multicultural relationships and deepens the understanding of diverse cultures and ethnic groups but also enhances the individual's global perception and pride in their own culture (Nur & Riadil, 2019). Strong English-speaking skills effectively open doors to various occupational opportunities (Dewi et al., 2016).

Many non-native English speakers (NNES) can neither speak English for communication nor speak it correctly and efficiently. This issue arises from a lack of vocabulary, feelings of nervousness, an unsupportive environment, and a lack of motivation (Amoah & Yeboah, 2021). As a result, these speakers tend to neglect learning or using English for communication purposes. It is thus plausible that proficiency in English is often limited to specific professions, with only specific companies prioritizing English skills. Specifically, those who possess the ability usually acquire English out of necessity for communication with foreigners. Consequently, many NNES experience nervousness and fear when confronted with the need to speak English and often face difficulties with vocabulary. This leads them to limit their English usage to essential situations, such as in a classroom setting (Ratnasari, 2020).

This inability to use English results in unfamiliarity or a lack of regular speaking practice, leading to a loss of confidence and denial of English-speaking ability (Safari & Fitriati, 2017; Saputra et al., 2023). It is therefore not surprising that these individuals fail to speak English fluently and naturally. Invariably, regular English speaking is required to achieve this ability, along with continuous practice to improve speaking proficiency and fluency as well as correct pronunciation and intonation. Despite these requirements, daily life requires a number of tasks for relaxation and self-care. In light of these challenges, English as a foreign language (EFL) educators should embrace innovative teaching methods to engage students and boost their enthusiasm for speaking, tailoring "instruction" to individual learning requirements. Given the crucial role that EFL teachers play in impacting students' lives, it is essential for them to assess students' prior knowledge and needs. Consequently, EFL instructors should consider implementing suitable instructional approaches that align with student needs (Ziqi et al., 2023).

Microlearning is considered a viable alternative for fast learning within a limited timeframe among younger generations (Lee, 2023; Leong et al., 2020). This tool involves a learning process starting from a small body of knowledge within a short time (Dolasinski & Reynolds, 2020; Kohnke, 2023; Torgerson & Iannone, 2019). Only the essence and main ideas are extracted for easier absorption (Nikkhoo et al., 2023; Samala et al., 2023). Each microlearning lesson focuses on a single learning objective and incorporates multiple sensory and modal elements, such as brief lectures, videos, text, images, and audio, among other elements. The microlearning approach integrates both practice and assessment to ensure effective learning and retention (Taylor & Hung, 2022). This technique empowers speakers by granting them control over their learning experience, offering easy

access to learning content, and allowing them to choose when they engage with different components of the microlearning module (Dolasinski & Reynolds, 2020). This adaptability is why this learning method takes less time compared to traditional approaches. Numerous studies have been conducted on the effectiveness of microlearning, demonstrating its efficiency in the learning and memorization of knowledge and skills. Microlearning is effective because knowledge can be reviewed in small pieces daily. This is more beneficial compared to traditional methods requiring longer review times, often resulting in limited retention for students. With microlearning, students may select the most suitable dates and times for self-study by using accessible and widely used channels, such as flashcards, TikTok, YouTube, podcasts, and Facebook, which are favored by younger generations presently.

Despite numerous studies on the effectiveness of microlearning, different research designs have caused scattered and ambiguous results with a lack of systematic synthesis of knowledge. Due to these issues, there is a significant need for research to synthesize knowledge systematically, leading to unambiguous conclusions and the development of learning management strategies that promote English speaking. This study aimed to evaluate the effectiveness of microlearning on English speaking in higher education. The methodology involved a systematic literature review and meta-analysis, with two primary objectives:

1. to investigate research characteristics related to the effectiveness of microlearning on English speaking among university students; and
2. to analyze and compare the effect size of microlearning on English speaking in this context.

The results of this research will contribute to the existing body of knowledge. This may allow individuals interested in enhancing their English-speaking skills, including university lecturers and agencies concerned with learning management, to employ the findings as a guideline for more efficient English speaking.

## **2. Methodology**

The meta-analytic procedures conducted (Glass et al., 1981) in this study involved the following: (1) gathering relevant scholarly sources; (2) categorizing the study characteristics; and (3) calculating effect sizes for the outcome measures in each study.

### **2.1 Search Strategy**

This study was initiated following approval (approval no. SWUEC-166/2566E) from the institutional review board at Srinakharinwirot University, Bangkok, Thailand, ensuring compliance with ethical standards for scientific research. To enhance the exploration of existing literature, the expertise of an experienced librarian with over a decade of experience was sought to select search terms and retrieval formulas. This step was crucial due to variations in databases, necessitating diverse retrieval methods.

The study used both a systematic review and meta-analysis to investigate the impact of microlearning on university students' English language proficiency. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guideline, a widely acknowledged framework for conducting systematic reviews and meta-analyses (Hasim et al., 2024; Page et al., 2021; Vallespin & Prudente, 2024), was employed. The PRISMA flow diagram followed in this study is presented in Figure 1.

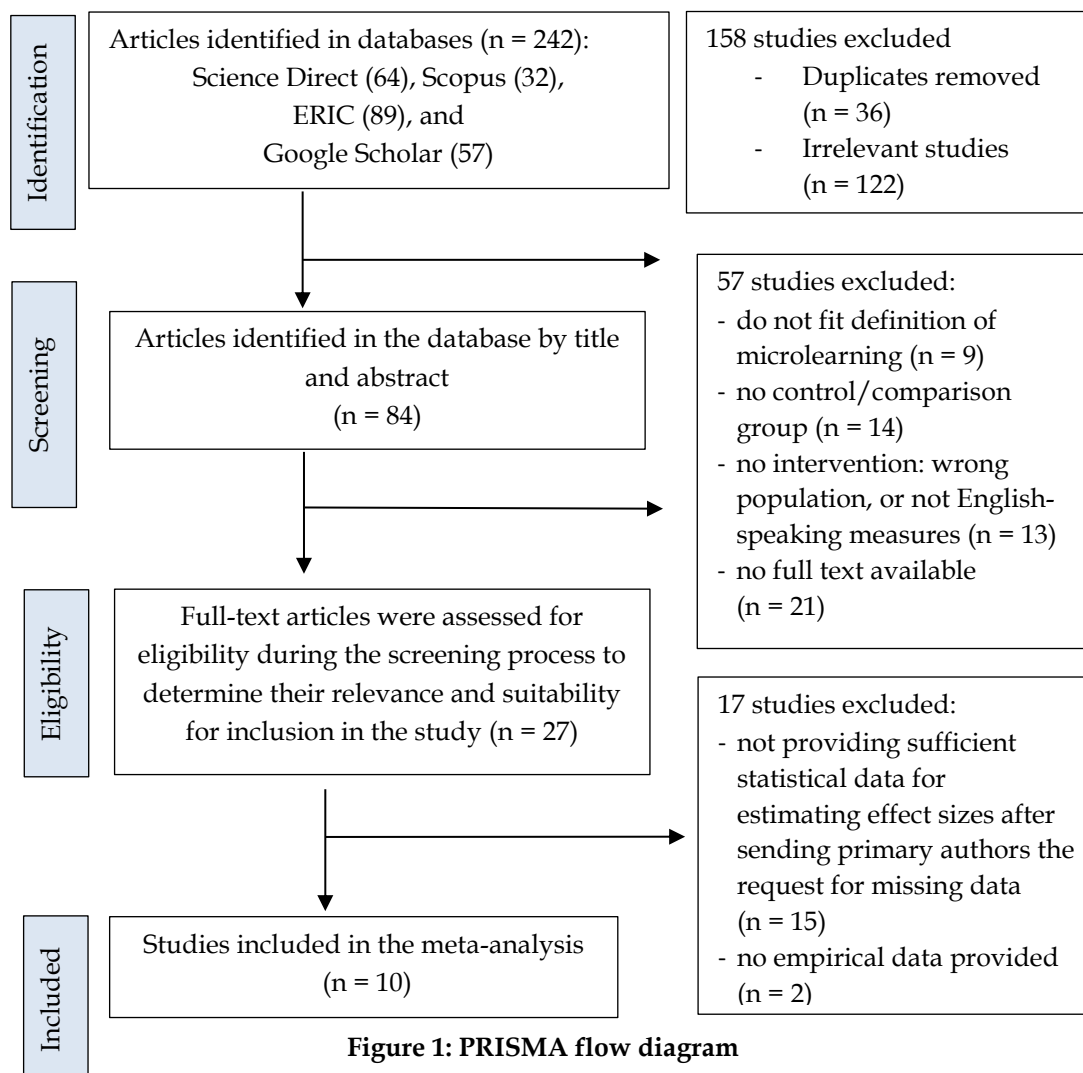


Figure 1: PRISMA flow diagram

The evaluation of the effects of microlearning on the English-speaking proficiency of university students followed the population, intervention, comparison, outcome, and study (PICOS) design criteria during the search and selection of studies for inclusion in the meta-analysis. In this study, PICOS was applied as follows: population (P): EFL students; intervention (I): microlearning; comparison (C): control or placebo group not exposed to microlearning; outcome (O): English-speaking skills; and study (S): randomized controlled trials or quasi-experimental quantitative studies with pre-tests and post-tests (employing a non-equivalent control group design).

## 2.2 Study Selection

As recommended by systematic review quality criteria, a minimum of two researchers should conduct the search for literature reviews (Shea et al., 2017). Therefore, for this study, two researchers independently conducted an electronic database search, focusing on peer-reviewed journals from 2018 to 2023. The selected databases included ERIC, Science Direct, Scopus, and Google Scholar, ensuring comprehensive coverage due to the widespread application of microlearning across various fields.

The literature search, completed in October 2023, excluded publications beyond this date. In all, 242 publications were retrieved from the electronic databases and manual searches and were organized in EndNote, a reference management database. After eliminating 36 redundant entries, an additional 122 irrelevant documents were excluded based on title and abstract screening. Additionally, 21 articles without full texts were removed, and the full texts of the remaining articles underwent scrutiny against the predefined selection and exclusion criteria outlined in Table 1.

**Table 1: Inclusion and exclusion criteria**

Criterion	Inclusion	Exclusion
Publication period	2018 - 2023 publication	Research conducted beyond this timeframe
Literature type	Peer-reviewed journals	Dissertations and theses
Language	English	Non-English
Document type	Scholarly articles and conference proceedings published in peer-reviewed journals and conferences proceedings	Publications not appearing in a peer-reviewed journal or conference proceeding
Accessibility	Full text available	Not accessible
Content	The same learning content	Learning content not the same
Implementation	Utilization of microlearning techniques	Does not employ microlearning techniques
Research design	The study required an experimental or quasi-experimental design, specifically a between-subject design that compared microlearning with traditional classroom methods	Non-experimental design or within-subject design with different learning content
Results	Sufficient data are needed to compute the effect size, including the reporting of sample size (N), mean (M), and standard deviation (SD)	Insufficient statistics provided or problematic statistics
English-speaking outcomes	Clear English-speaking outcomes	No clear English-speaking outcomes

Throughout this search process, if meta-analysis statistics were not clearly presented in an article, correspondence was initiated with the original author. We collaboratively selected search terms, conducted independent literature searches, and screened the identified documents together. In instances of disagreement, a

collective review of the data was undertaken, leading to consensus. Ultimately, 10 publications underwent systematic review and meta-analysis.

### **2.3 Data Extraction**

The data used were independently extracted by two reviewers, and any disagreements regarding eligibility were settled through agreement. The analysis involved extracting the following information: primary author; year of publication; sample size; participant characteristics; intervention technique; teaching methods; outcomes; assessed outcomes; and intervention duration. This process involved capturing the mean difference and corresponding 95% confidence interval for English-speaking scores in intervention and control groups.

### **2.4 Quality Assessment**

The Newcastle-Ottawa Scale-Education (NOS-E) was developed by modifying the Newcastle-Ottawa Scale, an instrument that aims to assess the quality of non-randomized comparative studies included in meta-analyses. Study quality was assessed using the modified NOS-E, which comprises five domains: representativeness of the intervention group; selection; comparability of the comparison group; study retention; and assessment blinding. Each domain was rated on a scale of 0 to 1, except for the comparability of the comparison group, which was rated on a scale of 0 to 2 (Cook & Reed, 2015). The study quality was categorized as high (5–6), medium (3–4), or low (0–2). In instances of disagreement between the authors' assessments, a third researcher intervened to reach a consensus.

### **2.5 Statistical Analysis**

In this investigation, data were collected on the characteristics of the selected research subjects and a coding framework was applied to organize the information. This coding framework served as the foundation for analyzing diversity in effect sizes and providing a descriptive overview of each study's characteristics. We collected the mean and standard deviation values of pre- and post-test scores for both groups in each study, alongside sample size information. The literature data, encompassing details such as author/s, publication year, and participant cases, were input into the R programming language for tests of heterogeneity and meta-analysis.

The analysis focused on the English-speaking scores of the microlearning and control groups. Since continuous data were extracted from various scales, we calculated the standardized mean difference (SMD) for effect size based on sample size (Cohen, 1988), along with 95% confidence intervals (CIs) for each study. Pooled studies underwent variance analysis. For continuous data from the same scale, we computed the weighted mean difference (WMD) and 95% confidence intervals (CIs). A significance level of less than 0.05 was considered for all analyses.

#### *2.5.1 Meta-analysis methods*

We utilized two meta-analysis models: the fixed-effect model for combining data in instances of homogeneity and the random-effects model when heterogeneity

was detected. Heterogeneity was deemed significant for a Cochran's Q statistic  $p$  value  $< 0.10$  and  $I^2 > 50\%$  (Higgins & Thompson, 2002; Higgins et al., 2003). The  $I^2$  statistic, representing the proportion of variability attributed to heterogeneity, was interpreted as follows: 25% – 50% as low; 50% to 75% as moderate; and 75%+ as high.

### 2.5.2 Sensitivity analysis

A sensitivity analysis was conducted in the presence of heterogeneity to assess whether it significantly affected the meta-analysis results. Each study was excluded in turn, and the pooled estimates were recalculated. The results were deemed not significantly different if the exclusion did not noticeably change outcomes.

### 2.5.3 Publication bias assessment

Publication bias was evaluated using a funnel plot and Egger's test of asymmetry (Egger et al., 1997; Mujiono et al., 2003) using the R program. The shapes of the funnel plots do not suggest evident asymmetry, and all Egger's test  $p$  values were above 0.05, indicating statistical support for funnel plot symmetry.

## 3. Findings

The findings presented in Table 2 are based on the findings of 10 reviewed studies that implemented a microlearning approach for EFL speaking classes.

### 3.1 Characteristics of the Included Studies

This review included a total of 10 studies published between 2018 and 2023, all written in English. Sample sizes across these studies ranged from 13 to 137 participants, resulting in a combined sample size of 743 (microlearning group = 372, control group = 371). The duration of interventions varied from 4 to 15 weeks. The characteristics of the included studies can be seen in Table 2.

Microlearning, as defined in these articles, consists of six key components:

1. presenting concise content with a short-learning design;
2. offering easy-to-understand lessons to minimize confusion;
3. providing unambiguous practical guidelines;
4. incorporating humor for more engaging lessons;
5. ensuring easy access; and
6. facilitating quick development.

It is also essential to adjust learning methods in accordance with changing ages and situations.

Table 2: Included studies' characteristics

Author (year)	Participant characteristics, sample size (EG/CG)	Intervention/s (duration)	Outcome measurement		Main results
			Outcome (duration)	Measurement tools	
Dang et al. (2022)	EFL freshmen students (13/13)	Video recording activities (18 weeks)	Students' oral performance	The speaking section of the Cambridge B1 Preliminary Test (PET)	User video recording can be used to improve a student's speaking skills for the Cambridge B1 Preliminary Test by allowing them to review their performance, identify areas for improvement, and practice speaking tasks repeatedly to enhance fluency and accuracy. <b>Pre-test:</b> EG 5.20 ± 0.46; CG 5.15 ± 0.52 <b>Post-test:</b> EG 7.72 ± 1.09; CG 6.62 ± 0.85
Gao et al. (2023)	Meetings, incentive travel, conferences, and exhibitions (MICE) learners (30/30)	TikTok (12 weeks)	Oral proficiency	Oral proficiency test	The use of TikTok in language learning positively impacted the motivation and oral proficiency of MICE learners compared to those who only used traditional teaching methods. TikTok promoted students' motivation, created an engaging learning environment, and encouraged the development of skills such as creativity and curiosity, leading to improved language skills in grammar, vocabulary, and pronunciation. <b>Pre-test:</b> EG 78.23 ± 6.89; CG 76.37 ± 8.77 <b>Post-test:</b> EG 89.47 ± 10.75; CG 56.20 ± 16.20
Hamad et al. (2019)	EFL students (24/24)	YouTubes and audio tracks imitation (YATI) (6 weeks)	Speaking skills	Speaking tests	Utilizing the YATI technique enhances the speaking skills, fluency, and pronunciation of EFL learners. <b>Pre-test:</b> – <b>Post-test:</b> EG 8.17 ± 1.10; CG 7.33 ± 1.51



Author (year)	Participant characteristics, sample size (EG/CG)	Intervention/s (duration)	Outcome measurement		Main results
			Outcome (duration)	Measurement tools	
Hanafiah et al. (2022)	Indonesian EFL students (30/30)	Computer-assisted language learning (CALL) (17 weeks)	Speaking skills	Speaking test and Hughes' speaking checklist	The experimental group surpassed the control group in the speaking post-test. <b>Pre-test:</b> EG 14.30 ± 1.68; CG 14.16 ± 1.78 <b>Post-test:</b> EG 15.13 ± 2.08; CG 18.43 ± 1.71
Karpovich et al. (2021)	First year students (137/137)	Monologue speaking tasks	Speaking skills	Monologue speaking tasks evaluation form	The experimental group participants outperformed those in the control group in the speaking post-test. <b>Pre-test:</b> – <b>Post-test:</b> EG 2.00 ± 0.26; CG 1.5 ± 0.37
Laksanasut (2022)	Students (41/40)	Learning activities with TikTok (14 weeks)	English-speaking skills	English-speaking scoring rubric	The speaking skills of the experimental group in the post-test were significantly superior to those of the control group at a statistical significance level of .01. <b>Pre-test:</b> – <b>Post-test:</b> EG 17.51 ± 2.02; CG 14.11 ± 3.20
Nur Aziz and Sabella (2021)	Foreign language learners (EFL) (20/20)	TikTok	Fluency of students' speaking ability	Fluency test	Incorporating the TikTok application into teaching speaking can foster enhanced fluency in elementary school students' speaking abilities. <b>Pre-test:</b> EG 79.00 ± 12.52; CG 84.50 ± 13.95 <b>Post-test:</b> EG 108.00 ± 8.34; CG 85.00 ± 11.47
Menggo et al. (2022)	EFL learners (28/28)	Video-assisted learning tasks	Speaking ability	The speaking scoring rubric	The participants in the experimental group outperformed those in the control group in the speaking post-test. <b>Pre-test:</b> EG 62.85 ± 4.60; CG 62.15 ± 4.56 <b>Post-test:</b> EG 80.29 ± 7.92; CG 67.57 ± 10.46

Author (year)	Participant characteristics, sample size (EG/CG)	Intervention/s (duration)	Outcome measurement		Main results
			Outcome (duration)	Measurement tools	
Opas (2023)	Non-English major students (21/21)	TikTok video lessons for the English for Work Course (15 weeks)	English- speaking skills	English- speaking test	Integrating TikTok as a supplementary tool in English instruction has shown significant potential to enhance the listening and speaking proficiency of EFL learners. <b>Pre-test:</b> EG 16.29 ± 3.12; CG 16.81 ± 3.60 <b>Post-test:</b> EG 42.50 ± 5.19; CG 35.62 ± 4.23
Qisthi and Arifani (2018)	EFL students (28/28)	The application of project-based learning via Instagram (4 weeks)	Speaking skill	Speaking skill test	There were notable discrepancies in speaking scores between students instructed through project-based learning using Instagram and those undergoing traditional teaching. <b>Pre-test:</b> EG 80.07 ± 3.29; CG 78.64 ± 2.96 <b>Post-test:</b> EG 82.68 ± 3.74; CG 79.61 ± 3.58

Note: EG = experimental group; CG = control group

### 3.2 Study Quality

The NOS-E was used to analyze the methodological quality of all the reviewed studies. Quality scores were assigned, with three studies receiving a score of 3 ( $n = 3$ ) and seven studies receiving a score of 5 ( $n = 7$ ) out of a maximum possible score of 6, as detailed in Table 3.

**Table 3: Quality score of all included studies**

No	Author (year)	Intervention group	Comparison group	Comparability of comparison group		Study retention	Blinding	Total score
				Non-randomized study				
				Baseline scores	Baseline characteristics	Lost to follow-up loss (< 25%)	Was outcome assessment blinded?	
1	Dang et al. (2022)	1	1	1	1	1	0	5
2	Gao et al. (2023)	1	1	1	1	1	0	5
3	Hamad et al. (2019)	1	1	0	0	1	0	3
4	Hanafiah et al. (2022)	1	1	1	1	1	0	5
5	Karpovich et al. (2021)	1	1	0	0	1	0	3
6	Laksanasut (2022)	1	1	0	0	1	0	3
7	Menggo et al. (2022)	1	1	1	1	1	0	5
8	Nur Aziz and Sabella (2021)	1	1	1	1	1	0	5
9	Opas (2023)	1	1	1	1	1	0	5
10	Qisthi and Arifani (2018)	1	1	1	1	1	0	5

### 3.3 Effect of Intervention

The combined effect size indicated a significant improvement in English-speaking scores with microlearning (SMD = 1.43, 95% CI = 1.10–1.76,  $p < .05$ ). The fixed-effect model was employed to aggregate the data, revealing favorable effects for the microlearning group (SMD = 1.43, 95% CI = 1.27–1.59,  $p < .05$ ). Notably, there was considerable statistical heterogeneity among the reviewed studies ( $I^2 = 66\%$ ,  $p < .05$ ), with individual effect sizes ranging from 0.63 to 2.39 (Figure 2).

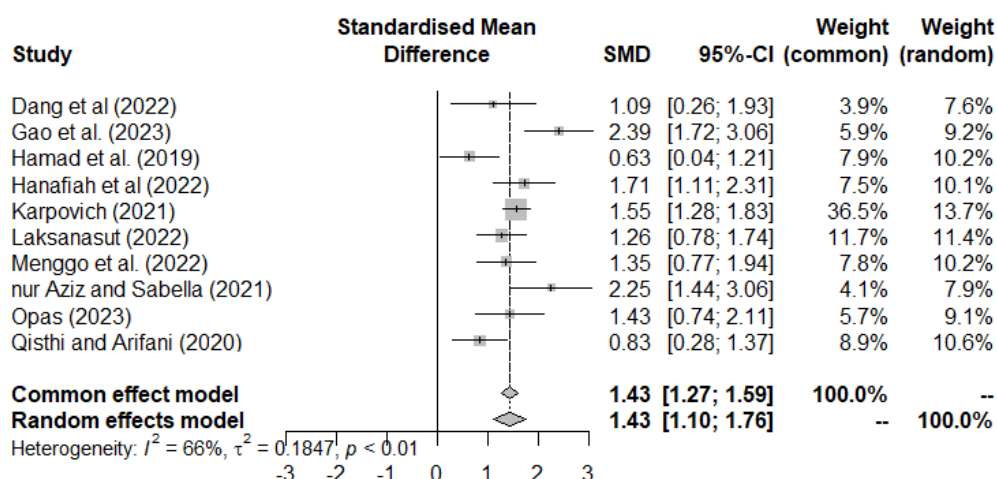


Figure 2: The effect of microlearning on English speaking at post-test

The funnel plot representing the ten reports on overall English-speaking analysis is presented in Figure 3. The symmetrical shape of the funnel plot suggests no significant bias in the main analysis ( $p > .05$ ).

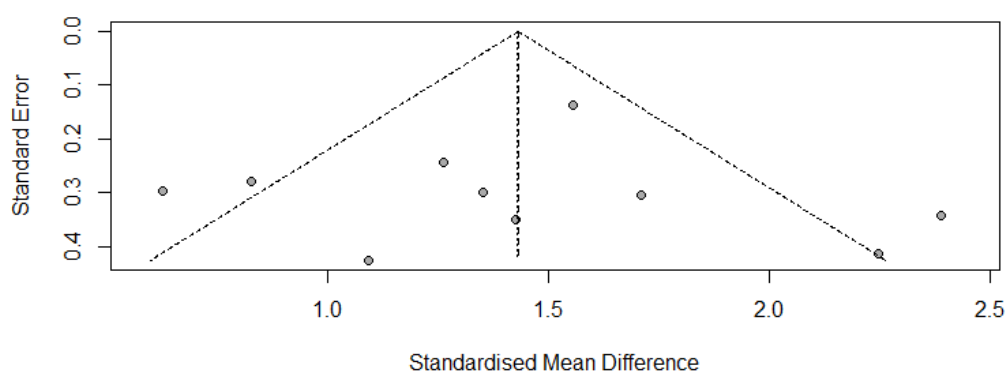


Figure 3: Funnel plot for English speaking as per reviewed studies

The black dots represent the studies from the study sample, positioned based on their estimated effect size and standard error.

#### 4. Discussion and Suggestions

Examining the use of microlearning for English language teaching and learning in the selected studies revealed noteworthy common achievements, challenges, and suggestions for future research. Table 4 presents the findings of the selected studies in relation to the effects of microlearning on teaching and learning.

Table 4: The effects of microlearning on teaching and learning as per reviewed studies

No	Publication	Findings
1	Dang et al. (2022)	Both the control and experimental groups showed enhancements in post-tests, with the experimental group exhibiting superior performance in grammar, vocabulary, fluency, pronunciation, and interactive communication. Statistical analysis verified a notable disparity between pre-test

No	Publication	Findings
		and post-test scores. Employing video recordings for speaking assignments emerged as a holistic enhancement approach. Survey data indicate positive student perceptions and effectiveness in enhancing speaking performance. Nevertheless, constraints such as the quasi-experimental structure and limited sample size imply that the results might not be widely applicable. Future research recommendations encompass a true experimental design with a larger sample and exploration of microlearning through video integration with tools such as Flipgrid or Padlet for easier submission of video assignments.
2	Gao et al. (2023)	The study investigated the effectiveness of integrating TikTok as a video aid in the education of meetings, incentive travel, conferences, and exhibitions (MICE) learners. Sixty participants were evenly split into control and experimental groups. The experimental group received instruction via TikTok, whereas the control group was instructed via traditional teaching methods. Both groups underwent pre- and post-tests. Survey outcomes reveal that MICE learners exposed to TikTok experienced significantly increased learning motivation and oral proficiency compared to those taught through conventional methods. The research proposed integrating TikTok as a video tool in MICE education to boost both learning motivation and oral proficiency among learners in this domain.
3	Hamad et al. (2019)	The challenge of formally teaching speaking skills advocates for an immersive environment. Using microlearning, the YouTubes and audio tracks imitation (YATI) method employed smartphones and applications for enhancing speaking skills in tech-savvy 16- to 20-year-olds. Despite initial slowness, YATI promoted confidence, intonation, and fluency. Results aligned with the positive impact of technology on language learning, particularly in listening comprehension. YATI fostered talent discovery and competition, being a successful microlearning tool for aural and oral proficiency in EFL learners. The study recommended incorporating YATI into curriculum design for optimal learning outcomes.
4	Hanafiah et al. (2022)	The study investigated the positive impact of integrating microlearning into online education in computer-assisted language learning (CALL) on Indonesian EFL students. This approach enhanced students' vocabulary and speaking skills and reduced anxiety. Microlearning, facilitated by online instruction, provided flexibility and diverse tasks, contributing to improved language competencies. Despite challenges, such as limited Internet access, the study suggested a blended approach of online and face-to-face instruction in Indonesia. The findings highlight the benefits of microlearning, namely enabling flexible study schedules and reducing stress through engaging online activities. Improved communication between instructors and learners was also emphasized, fostering individualized education. The study encouraged English teachers to incorporate microlearning through technology-based methods for enhanced educational outcomes. Acknowledging limitations, such as small sample size, the

No	Publication	Findings
		study recommended that future research explore the broader impacts of microlearning on different language skills and contexts.
5	Karpovich et al. (2021)	The study addressed the need for adaptation during students' transition to advanced education, emphasizing self-organization and the formation of universal competencies. Specifically focusing on EFL instruction, the research examined the use of microlearning-oriented monologue speaking tasks, which presented challenges for first year students. To address these challenges, microlearning instructions, including peer assessment and additional guidance, were implemented. The results show an improvement in the English-speaking skills of first year students, highlighting the significance of microlearning through preventive measures such as peer interaction and assessment in enhancing the performance of specific activities. In conclusion, the study suggested that integrating microlearning-oriented speaking tasks with peer interaction and assessment positively impacted the English-speaking skills of undergraduate students.
6	Laksanasut (2022)	In this study, TikTok was a valuable tool for ELT, specifically for English for occupational purposes (EOP) among Thai high school students, aiming to enhance their speaking skills. This approach facilitated the development of EFL students' speaking proficiency and contributed to creating a lively learning environment. Students not only improved their language competencies, including fluency and pronunciation, but also strengthened their content-based knowledge. The use of TikTok allowed for the exploration of social non-verbal communication and encouraged creative experimentation. Despite its potential, the implementation of TikTok into the course curriculum was limited. It is crucial for EFL teachers to carefully consider the most appropriate approach for students.
7	Menggo et al. (2022)	The video-based task technique significantly enhanced vocabulary, pronunciation, fluency, grammar, and comprehension in students' speaking ability. The class using this technique exhibited greater improvements compared to the non-video-based task group. Furthermore, the video-based task approach fostered learning flexibility, self-evaluation, and ICT capabilities among students. This research suggested that EFL teachers, particularly speaking instructors, should incorporate video-based tasks into their teaching methods. The findings emphasize the efficacy of this technique in enhancing speaking skills and its positive impact on students' learning approaches.
8	Nur Aziz and Sabella (2021)	According to student feedback, when used effectively, the Seesaw application had a beneficial effect on their proficiency in technology use during speaking classes. Recognizing lecturers as key influencers in this digital realm, students appreciated how technology, particularly Seesaw, brought the real world into language learning. This method not only teaches a new language but also introduces cultural elements, enhancing motivation and activity. While some students preferred a traditional learning atmosphere, teachers were advised to use

No	Publication	Findings
		technology carefully, tailoring activities to students' age, language level, interests, and needs. Teachers played a crucial role in guiding students and parents to appropriate websites. Future research should explore the application of Seesaw in teaching various language skills and genres, encouraging methodologies such as classroom action research.
9	Opas (2023)	This research laid the foundation for validation and referencing in relevant research to promote English listening and speaking for EFL learners and encouraged educators to integrate TikTok for enhanced student engagement and performance. The research underscored the effectiveness of TikTok as a supplementary tool for language teaching, aligning with existing research highlighting its positive impact on language proficiency. Student feedback revealed favorable attitudes toward TikTok, with students enjoying lessons and duet videos. While acknowledging the benefits, some limitations and negative opinions surfaced. Overall, TikTok proved valuable in enhancing English skills, emphasizing its role as supplementary material, though with considerations for potential drawbacks. This paper suggests that future research explore integrating TikTok into course syllabi for diverse EFL learner groups.
10	Qisthi and Arifani (2018)	This research discovered that Instagram had a noteworthy influence on EFL classroom instruction, particularly focusing on its efficacy in enhancing speaking abilities through project-based learning. Participants were assigned to create short dramas portraying telephone conversations, which were subsequently shared on Instagram. Utilizing a quasi-experimental design and non-parametric tests for data evaluation, the findings illustrate a substantial enhancement in speaking skills, rising from 1.22% in the control group to 3.25% in the experimental group. The study concluded by advocating for further exploration of integrating mobile applications such as Instagram into the EFL curriculum, given the promising outcomes.

Taking a closer look at the findings, this report reveals four foci. First, across the selected studies, the use of microlearning has shown a positive impact on post-test scores in terms of speaking ability (Dang et al., 2022; Gao et al., 2023; Qisthi & Arifani, 2018). The use of various innovative tools through the lens of microlearning, namely video recordings, gamification, technology implementation, and social media platforms, consistently allowed for participants' improvement in grammar, vocabulary, fluency, pronunciation, and interactive communication. This finding suggests a promising avenue for English language teachers and learners seeking comprehensive approaches to address the multifaceted nature of speaking proficiency. In other words, integrating video-based tasks and social media platforms for teaching methods through the microlearning approach may significantly contribute to a more comprehensive and effective approach to enhancing speaking skills.

Second, some studies have further highlighted how the use of short video content can shed light on innovative teaching strategies (Gao et al., 2023; Hamad et al., 2019; Menggo et al., 2022; Opas, 2023). Gao et al. (2023) and Qisthi and Arifani (2018) found that learners exposed to short-form videos on TikTok or engaged in project-based learning through the Instagram platform displayed heightened motivation and oral proficiency compared to those in control groups. These findings underscore the potential of incorporating social media into ELT to stimulate EFL student engagement and improve speaking proficiency. Similarly, as discussed by Nur Aziz and Sabella (2021), the use of mobile applications such as Seesaw has also emerged as a potential for future success. The positive impact of Seesaw on tech-savvy students in speaking classes indicates the potential of technology to bring real-world elements into language learning. However, it is worth noting that instructors should tailor these methods to the specific needs and preferences of their students as some students might still prefer a more traditional teaching and learning approach (Nur Aziz & Sabella, 2021).

Third, some existing studies have found significant enhancements in implementing microlearning for self-development. More specifically, the use of video recordings for speaking not only promotes self-assessment for learners but also ensures self-esteem and self-confidence for a growth mindset (Dang et al., 2022; Gao et al., 2023; Menggo et al., 2022). Hamad et al. (2019) and Hanafiah et al. (2022) advocated for the efficacy of microlearning in English education. Hamad et al. (2019) showcased the effectiveness of using YouTube videos and YATI for teaching English language in speaking classrooms as pedagogical tools to improve EFL students' speaking skills. The use of YATI and the microlearning approach has illustrated positive impacts on students' confidence, intonation, fluency, vocabulary, and overall language competencies. The findings by Hanafiah et al. (2022) also guide us in the same direction. The use of microlearning through online education in CALL for Indonesian EFL students benefits both the English-speaking competency and learning experience of students. Participating students enhanced their vocabulary and speaking skills and reduced anxiety. Interestingly, the flexibility and diverse tasks created enjoyment, reduced stress, and fostered individualized education.

Fourth, microlearning and educational technology should be integral components of modern curricula and syllabi due to their transformative impact on learning outcomes (Dang et al., 2022; Hanafiah et al., 2022). Microlearning enhances student engagement and knowledge retention (Hamad et al., 2019), and its adaptability allows for personalized, on-demand learning, catering to diverse learning styles (Hanafiah et al., 2022). Moreover, educational technology, encompassing tools and platforms, facilitates interactive and dynamic learning experiences (Nur Aziz & Sabella, 2021). Integrating technology into the curriculum prepares students for the digital era, which automatically fosters crucial skills such as digital literacy and collaboration (Hanafiah et al., 2022). Virtual resources also increase access to educational content, breaking down geographical barriers (Dang et al., 2022). The marriage of microlearning and educational technology not only aligns with contemporary learning preferences but also equips students with the skills needed for success in an increasingly



interconnected digital era, ensuring that the curriculum remains relevant and impactful.

In summary, the integration of microlearning and educational technology offers a promising pathway to enhance ELT, fostering engagement, motivation, and proficiency, while preparing students for the demands of the digital age.

## **5. Conclusion**

The reviewed studies have provided compelling evidence for the effectiveness of innovative approaches in enhancing speaking skills in EFL education. The synthesis of these studies underscores the dynamic landscape of innovative approaches to enhance speaking skills among EFL students. The findings suggest that a diversified, technology-integrated approach holds promise for language instructors seeking to enrich their pedagogical practices. Video-based tasks, microlearning, social media platforms, and mobile applications offer promising avenues for language instructors to enrich teaching methodologies and enhance students' speaking proficiency in many aspects. More importantly, the positive outcomes observed across these studies not only contribute to the ongoing discourse on effective language instruction. They also emphasize the need for continuous exploration and adaptation to meet EFL students' evolving needs in the digital age.

In summary, the reviewed studies highlight that microlearning underscores the significant benefits of using microlearning for English language teaching and learning, laying the foundation for advancing the understanding of innovative approaches to enhance speaking skills in EFL education. Nevertheless, it should be noted that the use of microlearning approaches does come with limitations. By addressing the outlined suggestions for future research, scholars and educators may continue to refine and adapt pedagogical practices, ensuring the continued evolution of effective language instruction in the dynamic landscape of language education.

### **5.1 Limitations**

It should be noted that the microlearning method is not without limitations. It is essential to acknowledge these limitations found in existing research. Three obvious limitations of previous studies are the limited capacity of microlearning, the small sample sizes, and the preferred traditional approach of English language teachers and learners.

The first limitation is that microlearning has a limited capacity and is more appropriate for less complex materials (Fitria, 2022). In this regard, EFL teachers must deliberately provide suitable approaches and tools for specific groups of students. Next, regarding small sample size (Hanafiah et al., 2022; Karpovich et al., 2021; Qisthi & Arifani, 2018), although experimental and control groups have been studied in prior research, the number of participants is limited with respect to the large number of EFL students across all regions. Furthermore, some learners have not yet been willing to use technology and microlearning as an alternative approach to English language learning (Nur Aziz & Sabella, 2021;

Opas, 2023). Some learners and educators prefer established teaching methodologies and the practices of a traditional teaching method to ensure predictable outcomes.

However, despite these constraints, the consistent positive trends observed in the improvement of speaking skills across different methodologies underscore the potential of these innovative approaches in EFL education. It is therefore perhaps sufficient for future research to take these challenges into consideration before choosing the most suitable teaching method that meets students' needs and preferences.

## 5.2 Recommendations for Further Studies

Due to the significant findings and constraints of the use of the microlearning approach for ELT in the chosen studies, the current report recommends future research take the following four points into consideration.

First, we suggest that future research take advantage of the strengths of microlearning. Previous studies have expressed concerns over the limited capability of microlearning. Fitria (2022) emphasized that microlearning is suitable for less complex contents and materials. Based on this assertion, it appears that if only microlearning is used with appropriate contents and materials, the effectiveness of microlearning is sufficient as an alternative approach for ELT. We thus recommend that future studies conduct a microlearning approach for short, clear, and concise English-speaking competency contents.

Second, we suggest that future research take the aspect "know your students" into consideration. The data analysis of the selected studies has found that some EFL learners and teachers were not pleased with the use or effectiveness of microlearning due to its innovative approach (Menggo et al., 2022). Some findings have revealed that learning new information in small chunks at a time through digital devices and social media platforms, such as mobile phones and TikTok, is not a suitable approach for ELT. This paper, on the contrary, asserts that it is perhaps most important to understand the students' needs and interests. The positive outcomes from these studies suggest that a diversified instructional strategy can cater to a broader range of learner preferences and styles (Nur Aziz & Sabella, 2021). Accordingly, this paper assists teachers who are encouraged to conduct student needs analysis and explore a blended approach, combining traditional teaching methods with innovative approaches appropriate for specific groups of learners.

Third, we suggest that future studies conduct research with the careful use of technology. Previous studies have suggested incorporating videos, social media, and technology into ELT to improve English-speaking skills, together with English for specific purposes (ESP). Building on Dang et al.'s (2022) recommendations, future research could explore the integration of microlearning through alternative tools. Investigating different platforms and their impacts on speaking skills may provide a more comprehensive understanding of the

potential of microlearning in EFL education. This paper argues that this approach may enhance learning motivation and oral proficiency among EFL learners.

Finally, we suggest that future research consider raising awareness of self-development. Some of the reviewed studies have highlighted that students' perceptions and confidence toward their English-speaking skills, as well as listening skills for some, increase significantly following a microlearning intervention (Dang et al., 2022; Gao et al., 2023; Menggo et al., 2022). Based on this assertion, perhaps by enhancing their self-esteem, self-confidence, and perceptions toward their own English language skills, it is likely that learners might be more willing to learn and improve their English speaking and build a solid foundation for a growth mindset. Considering the positive outcomes observed in individual studies, future research could explore the potential synergies of combining multiple innovative approaches.

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